(ix) Purge system (valve, purge strategy and calibrations).
(x) Vapor hose diameter and material.
(xi) Canister location (front, rear, mid-vehicle).
(xii) Onboard diagnostic hardware and calibrations.
(a)(7) Where vehicles are of a type which cannot be divided into evaporative/refueling emission families based on the criteria listed above (such as non-canister control system approaches), the Administrator will establish families for those vehicles based upon the features most related to their evaporative and/or refueling emission characteristics.
(b)(1)(i)–(vi) [Reserved]
(b)(1)(vii)(A) Vehicles of each evaporative/refueling emission family will be divided into evaporative/refueling emission control systems.
(B) The Administrator will select the vehicle expected to exhibit the highest evaporative and/or refueling emissions, from within each evaporative/refueling family to be certified, from among the vehicles represented by the exhaust emission-data selections for the engine family, unless evaporative and/or refueling testing has already been completed on the vehicle expected to exhibit the highest evaporative and/or refueling emissions for the evaporative/refueling family as part of another engine family's testing.
(C) If the vehicles selected in accordance with paragraph (b)(1)(vii)(B) of this section do not represent each evaporative/refueling emission control system then the Administrator will select the highest expected evaporative/refueling emission vehicle from within the unrepresented evaporative/refueling system.
(viii) For high-altitude evaporative and/or refueling emission compliance for each evaporative/refueling emission family, the manufacturer shall follow one of the following procedures:
(A) The manufacturer will select for testing under high-altitude conditions the one nonexempt vehicle previously selected under paragraph (b)(1)(vii)(B) or (b)(1)(vii)(C) of this section which is expected to have the highest level of evaporative and/or refueling emissions when operated at high altitude; or
(B) [Reserved]
(1)(ix)–(xii) [Reserved]
(b)(2) [Reserved]

[59 FR 16290, Apr. 6, 1994, as amended at 75 FR 22979, Apr. 30, 2010]

§ 86.098–25 Maintenance.

(a) [Reserved]
(b)(1)–(2) [Reserved]
(3)(i)–(v) [Reserved]
(vi)(A)–(D) [Reserved]
(E) Evaporative and/or refueling emission canister(s).
(F) Turbochargers.
(G) Carburetors.
(H) Superchargers.
(I) EGR System including all related filters and control valves.
(J) Mechanical fillpipe seals.

[59 FR 16291, Apr. 6, 1994, as amended at 75 FR 22979, Apr. 30, 2010]

§ 86.098–26 Mileage and service accumulation; emission measurements.

(a)(1) and (2) [Reserved]
(a)(3)(i)(A)–(B) [Reserved]
(a)(3)(ii)(A)–(B) [Reserved]
(C) Exhaust, evaporative and refueling emissions tests (as required) for emission-data vehicle(s) selected for testing under § 86.096–24(b)(1) (i), (ii), (iii), or (iv), or § 86.098–24 (b)(1)(vii)(B) shall be conducted at the mileage (2,000 mile minimum) at which the engine-system combination is stabilized for emission testing under low-altitude conditions.
(b) [Reserved]

[59 FR 16291, Apr. 6, 1994, as amended at 60 FR 43888, Aug. 23, 1995; 75 FR 22980, Apr. 30, 2010]

§ 86.098–28 Compliance with emission standards.

(a)(1)–(3) [Reserved]
(4) The procedure for determining compliance of a new motor vehicle with exhaust, evaporative and/or refueling emission standards (or family particulate emission limit, as appropriate) is as described in paragraphs (a)(4)(i) introductory text, (a)(4)(i)(C), (a)(4)(ii)(B) and (C), (a)(4)(iii), (a)(4)(v), (f) and (g) of this section and § 86.094–28 (a)(4)(i)(A) and (B), (a)(4)(ii)(A), (a)(4)(iv)) except where specified by paragraph (a)(7) of this section for the Production AMA Durability Program.

(i) Separate emission deterioration factors shall be determined from the exhaust emission results of the durability-data vehicle(s) for each engine-system combination. Separate evaporative and/or refueling emission deterioration factors shall be determined for each evaporative/refueling emission family-emission control system combination from the testing conducted by the manufacturer (gasoline-fueled and methanol-fueled vehicles only). Separate refueling emission deterioration factors shall be determined for each evaporative/refueling emission family-emission control system combination from the testing conducted by the manufacturer (petroleum-fueled diesel cycle vehicles not certified under the provisions of paragraph (g) of this section only).

(A)–(B) [Reserved]

(C) *Evaporative deterioration factor determination.* An evaporative emissions deterioration factor (gasoline-fueled and methanol-fueled vehicles only) shall be determined from the testing conducted as described in §86.094–21(b)(4)(i)(A), and in accordance with paragraphs (a)(4)(i)(C) (*1*) and (*2*) of this section, for each evaporative/refueling emission family-emission control system combination to indicate the evaporative emission level at the applicable useful life relative to the evaporative emission level at 4,000 miles as follows:

(*1*) Factor = Evaporative emission level at the useful life mileage for that standard minus the evaporative emission level at 4,000 miles.

(*2*) The factor shall be established to a minimum of two places to the right of the decimal.

(D) A refueling emissions deterioration factor (gasoline-fueled, methanol-fueled and petroleum-fueled diesel-cycle vehicles not certified under the provisions of paragraph (g) of this section) shall be determined from testing conducted and described in §86.098–21(b)(4)(i)(B) for each evaporative/refueling emission family-emission control system combinationto indicate the refueling emission level at the applicable usefule life relative to the refueling emission level at 4,000 miles as follows:

(*1*) Factor = Refueling emission level at the useful life mileage for that standard minus the refueling emission level at 4,000 miles.

(*2*) The factor shall be established to a minimum of two places to the right of the decimal.

(ii)(A) [Reserved]

(B) The official evaporative emission test results (gasoline-fueled and methanol-fueled vehicles only) for each evaporative emission-data vehicle at the selected test point shall be adjusted by addition of the appropriate deterioration factor: *Provided*, that if a deterioration factor as computed in paragraph (a)(4)(i)(C) of this section is less than zero, that deterioration factor shall be zero for the purposes of this paragraph.

(C) The official refueling emission test results (gasoline-fueled, methanol-fueled, and petroleum-fueled diesel cycle vehicles not certified under the provisions of paragraph (g) of this section) for each refueling emission-data vehicle at the selected test point shall be adjusted by addition of the appropriate deterioration factor: *Provided*, that if a deterioration factor as computed in paragraph (a)(4)(i)(D) of this section is less than zero, that deterioration factor shall be zero for purposes of this paragraph.

(iii)–(iv) [Reserved]

(v) Every test vehicle of an evaporative/refueling emission family must comply with the evaporative and/or refueling emission standards, as determined in paragraph (a)(4)(iii) of this section, before any vehicle in that family may be certified.

(a)(5)–(a)(6) [Reserved]

(a)(7) The procedure to determine the compliance of new motor vehicles in the Production AMA Durability Program described in §86.094–13 is the same as described in paragraphs (a)(4)(iii) and (v) of this section and §86.094–28 (a)(4)(iv). For the engine families that are included in the Production AMA Durability Program, the exhaust emission deterioration factors used to determine compliance shall be those that the Administrator has approved under §86.094–13. The evaporative emission deterioration factor for each evaporative /refueling emission family shall be determined and applied according to paragraph (a)(4)(ii)(B) of this section. The refueling emission deterioration

factor for each evaporative/refueling emission family shall be determined and applied according to paragraph (a)(4)(ii)(C) of this section. The procedures to determine the minimum exhaust emission deterioration factors required under § 86.094–13(d) are as described in paragraph (a)(7)(i) of this section and § 86.094–28 (a)(7)(ii).

(i)–(ii) [Reserved]

(b) [Reserved]

[59 FR 16292, Apr. 6, 1994, as amended at 59 FR 48503, Sept. 21, 1994; 75 FR 22980, Apr. 30, 2010]

§ 86.098–30 Certification.

(a)(1)–(18) [Reserved]

(a)(19) For all light-duty vehicles certified to refueling emission standards under § 86.098–8, the provisions of paragraphs (a)(19) (i) through (iii) of this section apply.

(i) All certificates issued are conditional upon the manufacturer complying with all provisions of § 86.098–8, both during and after model year production.

(ii) Failure to meet the required implementation schedule sales percentages as specified in § 86.094–8 be considered to be a failure to satisfy the conditions upon which the certificate(s) was issued and the vehicles sold in violation of the implementation schedule shall not be covered by the certificate.

(iii) The manufacturer shall bear the burden of establishing to the satisfaction of the Administrator that the conditions upon which the certificate was issued were satisfied.

(b)(1) [Reserved]

(b)(2) The Administrator will proceed as in paragraph (a) of this section with respect to the vehicles (or engines) belonging to an engine family or engine family-evaporative/refueling emission family combination (as applicable), all of which comply with all applicable standards (or family emission limits, as appropriate).

(b)(3) [Reserved]

(4)(i) [Reserved]

(b)(4)(ii) Remove the vehicle configuration (or evaporative/refueling vehicle configuration, as applicable) which failed, from his application:

(A) [Reserved]

(B) If the failed vehicle was tested for compliance with one or more of the exhaust, evaporative and refueling emission standards: The Administrator may select, in place of the failed vehicle, in accordance with the selection criteria employed in selecting the failed vehicle, a new emission data vehicle which will be tested for compliance with all of the applicable emission standards. If one vehicle cannot be selected in accordance with the selection criteria employed in selecting the failed vehicle, then two or more vehicles may be selected (e.g., one vehicle to satisfy the exhaust emission vehicle selection criteria and one vehicle to satisfy the evaporative and refueling emission vehicle selection criteria). The vehicle selected to satisfy the exhaust emission vehicle selection criteria will be tested for compliance with exhaust emission standards (or family emission limits, as appropriate) only. The vehicle selected to satisfy the evaporative and/or refueling emission vehicle selection criteria will be tested for compliance with exhaust, evaporative and/or refueling emission standards; or

(iii) Remove the vehicle configuration (or evaporative/refueling vehicle configuration, as applicable) which failed from the application and add a vehicle configuration(s) (or evaporative/refueling vehicle configuration(s), as applicable) not previously listed. The Administrator may require, if applicable, that the failed vehicle be modified to the new engine code (or evaporative/refueling emission code, as applicable) and demonstrate by testing that it meets applicable standards (or family emission limits, as appropriate) for which it was originally tested. In addition, the Administrator may select, in accordance with the vehicle selection criteria given in § 86.001–24(b), a new emission data vehicle or vehicles. The vehicles selected to satisfy the exhaust emission vehicle selection criteria will be tested for compliance with exhaust emission standards (or family emission limits, as appropriate) only. The vehicles selected to satisfy the evaporative emission vehicle selection criteria will be tested for compliance with all of the applicable emission standards (or family emission limits, as appropriate); or